

CLAIMS

We Claim:

- 1 A method for detecting and monitoring noncompliant interstate
5 transportation of a material, the method comprising the steps of:
 - (a) providing a detection and monitoring network whereby multiple
ports-of-entry are each equipped with a detection system that is in
communication with a central computer;
 - (b) using the detection systems to detect levels of the material in
10 vehicles passing through each of the ports-of-entry;
 - (c) associating the levels of material detected for each vehicle with the
respective vehicle;
 - (d) saving the vehicle material levels on a computer; and
 - (e) uploading the vehicle material levels detected at each port-of-entry
15 to the central computer for monitoring and review.
- 2 The method of claim 1 wherein step (b) further includes the step of using
the detection systems to detect levels of radiation.
- 20 3 The method of claim 2 wherein step (c) further includes step of: saving the
detected levels of material for each vehicle in an electronic file.

4 The method of claim 3 wherein step (c) further includes step of: when the radiation levels exceed a predetermined threshold, issuing an alarm to alert an operator.

5 5 The method of claim 4 wherein step (c) further includes step of: taking pictures of identification markings on the vehicle using a digital camera, and uploading the pictures with the file to the central computer.

6 The method of claim 5 wherein step (c) further includes step of: scanning
10 the vehicle's shipping documents, and uploading the scanned documents with the file to the central computer.

7 The method of claim 1 wherein the detector systems further include a controller that receives a stream of detected data from the detector systems, step
15 (c) further including steps of:

- (i) providing the computer with a software application for extracting the stream of detector data from the controller,
- (ii) associating the detector data with respective vehicles, and
- (iii) saving the data in a file.

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8 The method of claim 1 further including step of allowing a government agency to control the central computer.

9 The method of claim 1 wherein step (a) further includes step of: locating the multiple ports-of-entry in multiple states to create a regional network, wherein the multiple ports-of-entry report to a regional agency.

5 10 The method of claim 1 further including step of allowing a federal agency to control the central computer.

11 The method of claim 1 wherein step (a) further includes step of: locating the multiple ports-of-entry at state and federal borders to create a federal
10 network, wherein the multiple ports-of-entry report to a federal agency.

12 An interstate transportation detection and monitoring network, comprising:
a central computer; and
a plurality of detection and reporting systems in communication with the
15 central computer, wherein each detection and reporting system is located at a vehicle port-of-entry and includes,

a detector system for measuring levels of a material in vehicles,
a computer coupled to the detector system, the computer for
processing data detected by the detectors for each vehicle,
20 and
transferring the data to the central computer for monitoring.

13 The system of claim 12 wherein the computer saves the data detected for
each vehicle in a file.

14 The system of claim 13 wherein a digital camera and a scanner are
5 connected to the computer.

15 The system of claim 14 wherein when levels of the material are detected
for a vehicle that pass a predetermined threshold, a folder is created for storing
the file, digital images of the vehicle taken by the digital camera, and electronic
10 copies of the vehicle's shipping documents scanned by the scanner.

16 The system of claim 15 wherein the contents of the folder are uploaded to
the remote computer.

15 17 The system of claim 12 wherein the remote computer and the plurality of
detection and reporting systems form a regional network that is controlled by a
regional agency.

18 The system of claim 12 wherein the remote computer and the plurality of
20 detection and reporting systems form a federal network that is controlled by a
federal agency.

19 The system of claim 12 wherein the detector system includes detector assemblies mounted on each side of a vehicle pass-through and a controller.

20 The system of claim 19 wherein the detector system detects radiation
5 levels.

21 The system of claim 19 wherein the detector system detects bombs.

22 The system of claim 19 wherein the detector system detect drugs.

10 23 A server-based detection and monitoring network, comprising:
a central server for maintaining a national database for vehicles, wherein
each vehicle is identified by an identification number;
an identification mark located on vehicles in a standard position, the
15 identification mark including the vehicle's identification number;
a plurality of port-of-entry systems, each port-of-entry including an Internet
appliance coupled to the central server via a network, and detector
systems for detecting levels of a material inside vehicles, wherein
the detector systems further include a scanner for reading the
20 identification mark, such that as each vehicle passes the detection
assemblies, the identification mark on the vehicle is scanned for the
identification number, the internet appliance associates the
vehicle's identification number with a file and saves the detector

readings for the vehicle in the file, and a uploads file to the central server for storage in the national database.

24 The network of claim 23 wherein the central server allows shipments to be
5 monitored across the country by checking entries in the national database for the vehicles that have picked up a noncompliant material.

25 The network of claim 24 wherein the central server is controlled by a federal agency.

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26 The network of claim 25 wherein the federal agency is the Environmental Protection Agency.

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27 The network of claim 25 wherein the federal agency is the Department of Transportation.

28 A method for detecting and monitoring noncompliant interstate transportation of radioactive materials, the method comprising the steps of:

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- (a) providing detection systems at a plurality of interstate ports-of-entry, wherein each detection system includes detector assemblies for detecting radiation located on each side of a vehicle pass-through, a controller coupled to the detector assemblies, a

computer coupled to controller, and a digital camera coupled to the computer;

- (b) transmitting radiation data from a detector to the controller;
- (c) periodically requesting by the computer radiation data from the controller;
- (d) converting the radiation data into radiation levels and displaying the radiation levels;
- (e) when a vehicle is detected between the detector assemblies, storing the radiation levels in file and capturing digital images of the vehicle with the digital camera;
- (f) determining if the radiation levels exceed a predetermined threshold;
- (g) if the radiation levels exceed the predetermined threshold, signaling an alarm to alert an operator; and
- (h) uploading the file to a central computer.

29 The method of claim 28 wherein step (c) further includes the step of: receiving the radiation data as a stream of characters.

30 The method of claim 29 wherein step (e) further includes the step of: storing the radiation levels in array until the vehicle leaves the detector assemblies.

31 The method of claim 30 wherein step (e) further includes the steps of:
assigning a vehicle number to each vehicle that passes through the detector
assemblies, and identifying the file by the vehicle number assigned to vehicle.

5 32 The method of claim 31 wherein step (f) further includes the step of
comparing a geometric mean of the detectors and a calculation of a vehicle
surface reading with the predetermined threshold.

33 The method of claim 32 wherein step (g) further includes the step of:
10 allowing the operator to create a subfolder and storing the images in the
subfolder.

34 The method of claim 33 wherein step (g) further includes the step of:
storing scanned shipping documents for the vehicle with the file.

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35 The method of claim 34 wherein step (h) further includes the step of:

(i) requiring that the computer for dial the central computer and
hanging up after communication is made; and

(ii) in response, the remote computer calls back the computer,
20 and appears as a disk drive on the computer, thereby
allowing the operator of the computer to drag-and-drop
selected files and folders to the central computer.